

Remarks

Claims 1 through 12, 14, and 16 are now pending.

Rejections Under 35 U.S.C. Section 112

Claim 7 has been amended to delete the term "however".

Rejections Under 35 U.S.C. Section 103

The claims have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Corvasce et al. (U.S. Patent No. 5,672,639; hereinafter "Corvasce") in view of Kim et al. (KR2003037142, hereinafter "Kim"). To the extent that the amended claims are deemed unpatentable, these rejections are traversed.

Claim 1 has been amended to include the limitations of cancelled claims 13 and 15. Amended claim 1 recites a tire having a component comprising a rubber composition comprising a diene based elastomer, a starch/plasticizer composite, and an adduct of maleic anhydride and polybutadiene. The diene based elastomer is selected from natural or synthetic cis 1,4-polyisoprene rubber, 3,4-polyisoprene rubber, styrene/butadiene copolymer rubbers, isoprene/butadiene copolymer rubbers, styrene/isoprene copolymer rubbers, styrene/isoprene/butadiene terpolymer rubbers, cis 1,4-polybutadiene rubber and medium to high vinyl polybutadiene rubber having a vinyl 1,2- content in a range of about 15 to about 85 percent and emulsion polymerization prepared butadiene/acrylonitrile copolymers. Amended claim 1 does not include chlorinated rubbers.

Corvasce teaches a rubber composition and tire comprising a starch/plasticizer composite (abstract). Nowhere does Corvasce teach that the rubber composition may comprise a chlorinated rubber or a maleinized polybutadiene. Kim teaches a rubber composition comprising a maleinized polybutadiene and chlorinated rubber that shows improved releasing property (abstract). Nowhere does Kim teach nor suggest that a maleinized polybutadiene may be used in a rubber composition using diene-based elastomers as recited in amended claim 1.

The Examiner maintains that it would have been obvious to one of ordinary skill to have

added the maleinized polybutadiene of Kim to the rubber composition of Corvasce in order to improve releasing property. Applicants urge that no such motivation to combine the references exists and consequently prima facie obviousness has not been established.

Applicants urge that the teaching of Kim is specific to compositions containing chlorinated rubbers, and as such is not applicable to a rubber composition or tire as recited in amended claim 1. Kim refers to improvement in "releasing property" of the chlorinated rubber composition due to the presence of maleinized polybutadiene. Applicants first urge that this "releasing property" of Kim is the ability for a cured composition to release from a curing mold, as would be apparent to one skilled in the art. As such, Applicants note that use of a maleinized polybutadiene for such a purpose in a rubber composition is not representative of the accepted teaching in the rubber compounding art. Rather, the use of maleinized polybutadiene as taught in Kim is limited to chlorinated rubber compositions and is not applicable to rubber compositions in general.

As is well known to one skilled in the art, chlorinated rubber compositions typically include mold release agents to facilitate removal of the cured composition from the mold as taught in the section entitled "Processing Aids" at page 4-5 of Attachment 1 "Processing Hypalon". Nowhere does "Processing Hypalon" recite the use of maleinized polybutadiene as a mold release agent for Hypalon (chlorosulfonated polyethylene rubber). Applicants now refer to the Attachments 2 and 3 "Ricobond Maleinized Polybutadiene" and "Ricobonds and Mold Releases". In "Ricobond Maleinized Polybutadiene" it is disclosed that Ricobond is indeed a maleinized polybutadiene. In "Ricobonds and Mold Releases" it is taught that maleinized polybutadiene is typically used as an adhesion promoter, and that "molded rubber products containing Ricobond adhesion promoters require the use of a mold release to prevent mold sticking." Based on the teaching of "Ricobonds and Mold Releases", maleinized polybutadiene is conventionally used in rubber as an adhesion promoter that consequently makes mold release more difficult; it is typically necessary to use an additional mold release agent to facilitate removal of the cured rubber composition from a mold. Thus, while Kim may teach that maleinized polybutadiene in a chlorinated rubber composition

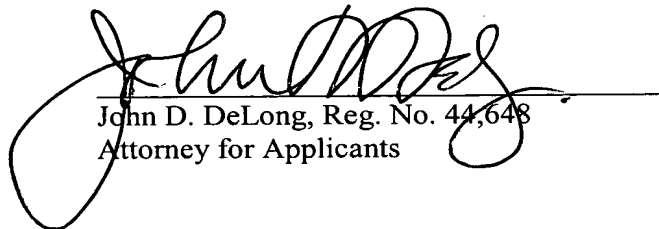
improves the "release property", conventional teaching in the art as exemplified by the attachments indicates that one skilled in the art would not expect that maleinized polybutadiene would lead to improved mold release in all rubbers. One skilled in the art would therefore understand the teaching of Kim to apply at most to chlorinated rubbers only, and not to elastomers in general. Amended claim 1 recites only non-chlorinated elastomers. One skilled in the art would therefore not be motivated to modify the tire of Corvasce to include the maleinized polybutadiene of Kim to arrive at the present claims. As no motivation exists to combine the references, no prima facie obviousness has been established.

Conclusion

Applicants urge that the amended claims are now fully patentable over the cited art.

Applicants respectfully request allowance of all claims.

Respectfully submitted,



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